

REMARKS

Claims 1-13, 20 and 21 are pending in this application. Claims 1-10 and 21 have been withdrawn from consideration. By this Amendment, the specification is amended to correct various informalities and typographical errors; and claims 11 and 20 are amended. Claims 14-19 are canceled without prejudice to, or disclaimer of, the subject matter recited in those claims. Support for the amendments can be found, for example, in the specification (see paragraphs [0015], [0025] and [0028] to [0030]). No new matter is added.

Reconsideration and allowance of the claims are respectfully requested in view of the foregoing amendments and the following remarks.

I. Claim Objection

The Office Action objects to claim 18. Claim 18 is canceled, thus rendering the objection moot. Reconsideration and withdrawal of the objection are respectfully requested.

II. Rejection Under 35 U.S.C. §112

The Office Action rejects claims 11-20 under 35 U.S.C. §112, second paragraph, as allegedly being indefinite. Claims 14-19 are canceled, thus rendering the rejection moot as to those claims. As to the remaining claims, claim 11 is amended to clarify the pressure as "applying a pressure to the metal fiber mixture through the jig," thus obviating the rejection. Claims 12, 13 and 20 are rejected for their dependency on claim 11 and, thus, the amendment to claim 11 also obviates the rejection as to claims 12, 13 and 20. Accordingly, reconsideration and withdrawal of the rejection are respectfully requested.

III. Rejections Under 35 U.S.C. §103

A. Hager, Gadow, Kawai, Yonetake and Bieler

The Office Action rejects claims 11-14 and 17-19 under 35 U.S.C. §103(a) over U.S. Patent No. 6,013,371 to Hager et al. ("Hager") in view of U.S. Patent Application Publication No. 2002/0142146 to Gadow et al. ("Gadow") and U.S. Patent No. 5,993,733 to Kawai

("Kawai"); rejects claim 15 under 35 U.S.C. §103(a) over Hager in view of Gadow and Kawai, and further evidenced by U.S. Patent Application Publication No. 2006/0286361 to Yonetake ("Yonetake"); and rejects claims 11-13, 18 and 20 under 35 U.S.C. §103(a) over U.S. Patent No. 5,891,249 to Bieler et al. ("Bieler") in view of Kawai. Claims 14, 15 and 17-19 are canceled, thus rendering the rejection moot as to those claims. As to the remaining claims, these rejections are respectfully traversed.

Without conceding the propriety of the rejections, and in the interest of obtaining allowance, independent claim 11 is amended to incorporate the limitations of non-rejected claim 16. Accordingly, the rejections are overcome and should be withdrawn.

B. Bieler, Kawai and Dinwoodie

The Office Action rejects claims 15 and 16 under 35 U.S.C. §103(a) over Bieler in view of Kawai and further in view of U.S. Patent No. 5,002,836 to Dinwoodie et al. ("Dinwoodie"). This rejection is respectfully traversed.

Claim 15 is canceled, thus rendering the rejection moot as to that claim, and claim 11 is amended to incorporate to subject matter of claim 16. Thus, this rejection is respectfully traversed as to claim 11.

For at least the reasons presented below, Bieler, Kawai and Dinwoodie do not disclose, and would not have rendered obvious, a method for producing a metal-based carbon fiber composite material comprising, *inter alia*, "obtaining a metal mixture by immersing carbon fiber into a suspension wherein metal powder is dispersed in a solvent," as recited in claim 11. (Emphasis added).

The Office Action asserts that Bieler is directed to a method for preparing metal matrix fiber composites comprising introducing a tow of fibers into a closed chamber in which particles of a metal containing powder are aerosolized to coat the particles onto the fiber (Bieler, col. 4, lines 42-51 and Office Action, page 9). As expressly disclosed by Bieler,

use of the aerosolizer in its method achieves uniform distribution of the matrix around each fiber (Bieler, col. 5, lines 48-51). Thus, Bieler does not provide any reason or rationale to have modified its method to have included immersing carbon fiber into a solvent-borne metal powder suspension, as recited in claim 11.

Kawai discloses a method of manufacturing a synchronizing ring having an annular structural part and a frictional layer formed on the inner circumference of the structural part (Kawai, col. 3, lines 33-35). The synchronizing ring is made by a method comprising a molding process and a sintering process, which can be performed individually or simultaneously (Kawai, col. 3, lines 48-53). Separately, Dinwoodie discloses metal matrix composites (MMCs) that are made of inorganic oxide fibers aligned and embedded in a metal matrix (Dinwoodie, col. 1, lines 52-56). To make MMCs, Dinwoodie discloses assembling fibers into a preform to bind the fibers together to prevent movement. The preform can be made using a binder or by packing the fibers into a tube or mold (Dinwoodie, col. 7, lines 40-68). Molten metal is then squeezed into the preform under pressure, or in a vacuum (Dinwoodie, col. 8, lines 1-8). However, nowhere does Kawai or Dinwoodie disclose or provide any reason or rationale for one of ordinary skill in the art to have combined and modified their methods with Bieler to have included a method for producing a metal-based carbon fiber composite material comprising, *inter alia*, immersing carbon fiber into a suspension wherein metal powder is dispersed in a solvent, as recited in claim 11, with any reasonable expectation of success and without the benefit of Applicants' specification. Thus, Kawai and Dinwoodie do not remedy the deficiencies of Bieler and, even if combined with Bieler, would not have rendered obvious each and every feature of claim 11.

In view of the foregoing, Bieler, Kawai and Dinwoodie would not have rendered obvious each and every feature of claim 11. Accordingly, reconsideration and withdrawal of the rejection are respectfully requested.

IV. Conclusion

In view of the foregoing, it is respectfully submitted that this application is in condition for allowance. Favorable reconsideration and prompt allowance of the claims are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number set forth below.

Respectfully submitted,



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